We Claim:

1. A method for processing a signal, which comprises the following steps:

receiving the signal;

carrying out channel selection with an analog channel selection filter;

converting the signal to a digital, discrete-time and discrete-value signal;

mathematically reconstructing a continuous-time and continuous-value signal profile using zero crossings $\{t_i\}$ and phase values $\{\phi(t_i) = k_i \cdot \pi/2,\ k_i \in N_0\}$ by way of a mathematical reconstruction algorithm using a function system $\{\varphi(t - k)\}$.

2. The method according to claim 1, wherein the receiving step comprises receiving a digitally modulated signal in a cordless communications system.

3. The method according to claim 1, wherein the function system is an orthogonal function system.

4. The method according to claim 1, which comprises limiting the signal and oversampling the limited signal for digitizing the received signal.

5. The method according to claim 4, wherein the oversampling step comprises producing a signal with a word length of 1.

6. The method according to claim 1, which comprises FSK-modulating the signal.

7. The method according to claim 1, which comprises carrying out group delay time equalization in a signal path downstream from the mathematical reconstruction.

8. The method according to claim 1, which comprises converting a signal frequency to an intermediate frequency after the channel selection.

9. A receiver circuit for a cordless communications system, comprising:

an analog signal processing section and a digital signal processing section;

said analog signal processing section containing a channel selection filter;

said digital signal processing section containing a phase reconstruction circuit for mathematical reconstruction of a continuous-time and continuous-value signal profile using zero crossings $\{t_i\}$ and periodic phase values $\{\phi(t_i) = k_i \cdot \pi/2, k_i \in N_0\}$, by way of a mathematical reconstruction algorithm using a function system $\{\varphi(t - k)\}$.

10. The receiver circuit according to claim 9, wherein said digital signal processing section includes a group delay time equalizer for equalization of at least the signal distortion caused by said channel selection filter.

11. The receiver circuit according to claim 10, wherein said group delay time equalizer is an all-pass filter.

12. A receiver circuit for a cordless communications system, comprising:

an analog signal processing section and a digital signal processing section connected to said analog signal processing section;

said analog signal processing section containing a channel selection filter;

said digital signal processing section containing a phase reconstruction circuit programmed to process a mathematical reconstruction algorithm using a function system $\{\varphi(t - k)\}$ for mathematical reconstruction of a continuous-time and continuous-value signal profile using zero crossings $\{t_i\}$ and periodic phase values $\{\phi(t_i) = k_i \cdot \pi/2,\ k_i \in N_0\}$.

13. The receiver circuit according to claim 12, wherein said digital signal processing section includes a group delay time equalizer for equalization of at least the signal distortion caused by said channel selection filter.

14. The receiver circuit according to claim 13, wherein said group delay time equalizer is an all-pass filter.